

**REMARKS**

This Reply is intended to be completely responsive to the non-final Office Action dated July 09, 2008.

**Status**

Claims 1, 3, 5-13, 15, 17, 18, 21-23, 25, 27-30, 32, 34, 36-39, 41, 43, 61, 63-66, and 68-70 are pending in this Application.

Claims 1, 3, 5-9, 11, 13, 15, 17, 21, 23, 25, 27, 29, 30, 32, 34, 36, 38, 39, 41, 61, 63, 64, 68, and 69 stand rejected, and claims 10, 12, 18, 22, 28, 37, 43, 66, and 70 stand withdrawn.

Claim 65 has been objected to as being dependent upon a rejected base claim, but otherwise recites allowable subject matter.

Applicant believes the rejections raised by the Examiner have been addressed, and the Application is in condition for allowance. Reconsideration and allowance of pending claims 1, 3, 5-13, 15, 17, 18, 21-23, 25, 27-30, 32, 34, 36-39, 41, 43, 61, 63-66, and 68-70 is respectfully requested.

**Claim Rejections – 35 U.S.C. § 102(b)**

1. Rejection of Claims 1, 3, 5, 7-9, 11, 13, 17, 21, 23, 27, 29, 30, 32, 36, 38, 39, 61, 63, 64, 68, and 69 under 35 U.S.C. § 102(e) as Anticipated by U.S. Patent Pub. 2005/0113924 to Buttermann

On page 2 of the Office Action, the Examiner rejected claims 1, 3, 5, 7-9, 11, 13, 17, 21, 23, 27, 29, 30, 32, 36, 38, 39, 61, 63, 64, 68, and 69 under 35 U.S.C. 102(e) as anticipated by U.S. Patent Pub. 2005/0113924 to Buttermann (“the Buttermann Application”). In response to the rejection, Applicant has attached hereto a Declaration of Prior Invention under 37 C.F.R. § 1.131 that establishes invention of the subject matter of claims 1, 3, 5, 7-9, 11, 13, 17, 21, 23, 27, 29, 30, 32, 36, 38, 39, 61, 63, 64, 68, and 69 prior to August 7, 2003, the filing date of

provisional application 60/492,966 to which the Buttermann Application claims priority. In particular, claims 1, 3, 5, 7-9, 11, 13, 17, 21, 23, 27, 29, 30, 32, 36, 38, 39, 61, 63, 64, 68, and 69 of the present application read on one or more of the embodiments of the invention shown in the drawings of Exhibit A of the Declaration of Prior Invention. Further, the Declaration of Prior Invention provides facts in evidence of various steps taken between August 7, 2003 and the filing date of the present application to establish diligence between August 7, 2003 and constructive reduction to practice of the present invention. In view of the Declaration of Prior Invention removing the Buttermann Application from consideration with respect to claims 1, 3, 5, 7-9, 11, 13, 17, 21, 23, 27, 29, 30, 32, 36, 38, 39, 61, 63, 64, 68, and 69, Applicant respectfully requests that the Examiner withdraw the rejection of claims 1, 3, 5, 7-9, 11, 13, 17, 21, 23, 27, 29, 30, 32, 36, 38, 39, 61, 63, 64, 68, and 69 under 35 U.S.C. 102(e) as anticipated by the Buttermann Application.

2. Rejection of Claims 1, 3, 5-7, 32, 34, 38, 61, 63, and 68 under 35 U.S.C. § 102(b) as Anticipated by Hedman et al.

On page 3 of the Office Action, the Examiner rejected claims 1, 3, 5-7, 32, 34, 38, 61, 63, and 68 under 35 U.S.C. § 102(b) as anticipated by Hedman et al., U.S. Patent No. 4,759,769. Applicant respectfully asserts that claims 1, 3, 5-7, 32, 34, 38, 61, 63, and 68 are not anticipated by Hedman et al.

Each of independent claims 1, 7, and 61 recite “a support” “wherein the support comprises a first portion slidably received in a second portion and wherein the height of the vertebral prosthesis is adjusted by sliding the first portion relative to the second portion.” Independent claim 32 recites “a shaft” “the shaft comprising a first portion slidably received in a second portion and wherein the height of the vertebral prosthesis is adjusted by sliding the first portion relative to the second portion.” In discussing one embodiment, Applicant’s specification states that “the height of shaft 16 to be adjusted as desired by the surgeon.” Specification, paragraph [0036]. Hedman et al. does not identically disclose “a support” “wherein the support comprises a first portion slidably received in a second portion and wherein the height of the

vertebral prosthesis is adjusted by sliding the first portion relative to the second portion,” as recited in independent claims 1, 7, and 61, or a “shaft comprising a first portion slidably received in a second portion and wherein the height of the vertebral prosthesis is adjusted by sliding the first portion relative to the second portion,” as recited in independent claim 32.

In contrast, Hedman et al. discloses an “artificial disc 20” including “two pairs of helical compression or coil springs … [e]ach pair of coil springs consists of an outer coil spring 72 and a concentric inner coil spring 74.” Col. 3, lines 19-22. The Examiner identifies springs 72 and 74 of Hedman as corresponding to a support having “a first portion slidably received in a second portion and wherein the height of the vertebral prosthesis is adjusted by sliding the first portion relative to the second portion.” The Examiner states “Hedman discloses an adjustable height support shaft (shaft 74 + 72 is a spring and compresses to different heights).” While the Examiner is correct that compression or coiled springs, such as springs 72 and 74, of Hedman et al. change length in response to axial loading, the springs of Hedman et al. do not allow the height of “artificial disc 20” to be “adjusted” as recited in independent claims 1, 7, 32, and 61.

Accordingly, Applicant respectfully asserts that independent claims 1, 7, 32, and 61, and the corresponding dependent claims 3, 5, 6, 34, 38, 63, and 68, are not anticipated by Hedman et al. under 35 U.S.C. § 102(b).

3. Rejection of Claims 1, 5, 7, 11, 13, 32, 38, 61, 63, 68, and 69 under 35 U.S.C. § 102(e) as Anticipated by Malek

On pages 3-4 of the Office Action, the Examiner rejected claims 1, 5, 7, 11, 13, 32, 38, 61, 63, 68, and 69 under 35 U.S.C. § 102(e) as anticipated by Malek, U.S. Patent Pub. No. 2005/0071007. In response to the rejection, Applicant has attached hereto a Declaration of Prior Invention under 37 C.F.R. § 1.131 that establishes invention of the subject matter of claims 1, 5, 7, 11, 13, 32, 38, 61, 63, 68, and 69 prior to September 30, 2003, the filing date of the Malek reference. In particular, claims 1, 5, 7, 11, 13, 32, 38, 61, 63, 68, and 69 of the present application read on one or more of the embodiments of the invention shown in the drawings of Exhibit A of the Declaration of Prior Invention. Further, the Declaration of Prior Invention

provides facts in evidence of various steps taken between September 30, 2003 and the filing date of the present application to establish diligence between September 30, 2003 and constructive reduction to practice of the present invention. In view of the Declaration of Prior Invention removing Malek from consideration with respect to claims 1, 5, 7, 11, 13, 32, 38, 61, 63, 68, and 69, Applicant respectfully requests that the Examiner withdraw the rejection of claims 1, 5, 7, 11, 13, 32, 38, 61, 63, 68, and 69 under 35 U.S.C. 102(e) as anticipated by Malek.

4. Rejection of Claim 39 under 35 U.S.C. § 102(b) as Anticipated by U.S. Patent No. 5,827,328 to Buttermann

On page 4 of the Office Action, the Examiner rejected claim 39 under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,827,328 to Buttermann (“the Buttermann Patent”). Applicant respectfully asserts that claim 39 is not anticipated by the Buttermann Patent.

Independent claim 39 recites a “vertebral prosthesis system” including “a pedicle screw retainer coupled to at least one of the shaft, the first endplate, and the second endplate.” The Buttermann Patent does not identically disclose a “vertebral prosthesis system” including “a pedicle screw retainer coupled to at least one of the shaft, the first endplate, and the second endplate” as recited in independent claim 39. In contrast, the Buttermann Patent states “[t]he present prosthetic device does not require conventional mechanical attachments, such as pegs or screws, to hold the prosthesis permanently in place.” Col. 7, lines 13-15 (emphasis added). On page 4 of the Office Action, the Examiner points to col. 7, lines 16-20 of the Buttermann Patent as disclosing “a pedicle screw retainer.” However, the portion of the Buttermann Patent cited by the Examiner states that “[t]he present prosthetic device, however, may include mechanical or other attachments to supplement the porous portions of the fixation members and to temporarily fix the prosthetic device in place until bone ingrowth has occurred.” Col. 7, lines 16-19. This statement does not support the conclusion that the Buttermann Patent identically discloses a “vertebral prosthesis system” including “a pedicle screw retainer coupled to at least one of the shaft, the first endplate, and the second endplate,” as recited in independent claim 39. In contrast, the Buttermann Patent discloses a “prosthetic device 10” in which “intravertebral (i.e.,

within a vertebral body) positioning of the fixation members maintains the prosthetic device in stable relationship at the operative intervertebral joint." Col. 4, lines 50-53.

Accordingly, Applicant respectfully asserts that independent claim 39 is not anticipated by the Butterman Patent under 35 U.S.C. § 102(b).

**Claim Rejections – 35 U.S.C. § 103(a)**

1. Rejection of Claims 6, 15, 25, 34, and 41 under 35 U.S.C. § 103(a) as Unpatentable over the Buttermann Application

As discussed above, Applicant has attached hereto a Declaration of Prior Invention under 37 C.F.R. § 1.131 that establishes invention of the subject matter of claims 6, 15, 25, 34, and 41 prior to August 7, 2003, the filing date of provisional application 60/492,966 to which the Buttermann Application claims priority. In particular, claims 16, 15, 25, 34, and 41 of the present application read on one or more of the embodiments of the invention shown in the drawings of Exhibit A of the Declaration of Prior Invention. Further, the Declaration of Prior Invention provides facts in evidence of various steps taken between August 7, 2003 and the filing date of the present application to establish diligence between August 7, 2003 and constructive reduction to practice of the present invention. In view of the Declaration of Prior Invention removing the Buttermann Application from consideration with respect to claims 16, 15, 25, 34, and 41, Applicant respectfully requests that the Examiner withdraw the rejection of claims 16, 15, 25, 34, and 41 under 35 U.S.C. 103(a) as unpatentable over the Buttermann Application.

2. Rejection of Claim 1, 3, 6, 7, 9, 11, 13, 15, 32, 34, 38, 41, 61, 63, 68, under 35 U.S.C. § 103(a) as Unpatentable over the Buttermann Patent in view of Hedman et al.

On pages 5-6 of the Office Action, the Examiner rejected claims 1, 3, 6, 7, 9, 11, 13, 15, 32, 34, 38, 41, 61, 63, 68, and 69 under 35 U.S.C. § 103(a) as unpatentable over the Buttermann Patent in view of Hedman et al. Applicant respectfully asserts that claims 1, 3, 6, 7, 9, 11, 13, 15, 32, 34, 38, 41, 61, 63, 68, and 69 are not obvious over the Buttermann Patent in view of

Hedman et al. because the Buttermann Patent teaches away from the combination of elements suggested by the Examiner.

The Buttermann Patent teaches away from using screws, such as those disclosed by Hedman et al., for fixation of a prosthesis device.

On page 5 of the Office Action, the Examiner states it would have been obvious to a person of ordinary skill in the art to combine tabs 46 and 64 and screws 94 and 96 of Hedman et al. with the vertebral prosthesis disclosed in the Buttermann Patent. See Office Action, page 5. However, the Buttermann Patent explicitly identifies Hedman et al. as one example of “[e]xisting prosthetic devices [that] have met with limited success in reproducing the biomechanics of a natural disc.” Col. 1, lines 46-55. In the same column, the Buttermann Patent identifies the use of screws for attachment as undesirable, stating that “mechanical attachments, such as pegs or screws, which are known to loosen under cyclic loading conditions.” Col. 1, line 66 to col. 2, line 1. It is in light of these identified problems with the use of screws for attachment, that the Buttermann Patent teaches that “[t]he present prosthetic device does not require conventional mechanical attachments, such as pegs or screws, to hold the prosthesis permanently in place.” Col. 7, lines 13-15 (emphasis added).

Because the Buttermann Patent teaches away from using mechanical attachments, such as the screws taught by Hedman et al., Applicant respectfully asserts that a person of ordinary skill in the art would not have been motivated to make the combination set forth by the Examiner. Accordingly, Applicant respectfully submits that the subject matter recited in independent claims 1, 7, 11, 32, and 61, and dependent claims 3, 6, 9, 13, 15, 34, 38, 41, 63, 68, and 69, are patentable over the Buttermann Patent in view of Hedman et al.

### Conclusion

Claims 1, 3, 5-13, 15, 17, 18, 21-23, 25, 27-30, 32, 34, 36-39, 41, 43, 61, 63-66, and 68-70 are pending in the present Application. Claims 10, 12, 18, 22, 28, 37, 43, 66, and 70 stand withdrawn. Claims 1, 7, 11, 21, 32, 39, and 61 have been amended to correct grammatical

errors. Applicant believes that the present application is now in condition for allowance. Favorable reconsideration of the application, as amended, is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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